

navigating bridge and the engineroom, the propulsion plant must be controlled entirely from the navigating bridge, with no means of normal engine control from the engineroom.

(e) On vessels equipped with pilot-house control, each local control station in the engineroom must have an indicator if:

(1) Manual operation from the local control station is an alternative means of control; and

(2) The local control station is not immediately adjacent to the engineroom control station; and

(3) Reliable voice communication and calling that meets the requirements of § 113.30-5(h) is not provided.

(f) Engine order telegraph and remote propulsion control systems must be electrically separate and independent, except that a single mechanical operator control device with separate transmitters and connections for each system may be used.

[CGD 74-125A, 47 FR 15272, Apr. 8, 1982, as amended by CGD 81-030, 53 FR 17847, May 18, 1988; CGD 94-108, 61 FR 28290, June 4, 1996]

§ 113.35-5 Electric engine order telegraph systems.

(a) Each electric engine order telegraph system must have transmitters and indicators that are electrically connected to each other.

(b) Each engineroom indicator must be capable of acknowledgment of orders.

(c) There must be an audible signal at each instrument. The signal at both locations must sound continuously when the transmitter and the indicator do not show the same order.

(d) Each telegraph instrument must meet the protection requirements of § 111.01-9 of this chapter.

(e) Each system must have an alarm which—

(1) Automatically sounds and visually signals a loss of power to the system;

(2) Is on the navigating bridge; and

(3) Has a means to reduce the audible signal from 100 percent to not less than 50 percent.

[CGD 74-125A, 47 FR 15272, Apr. 8, 1982, as amended by CGD 94-108, 61 FR 28290, June 4, 1996]

§ 113.35-7 Electric engine order telegraph systems; operations.

(a) Where two or more transmitters, located on or on top of, or on the wings of, the navigating bridge operate a common indicator in the engineroom, the transmitters must:

(1) Operate in synchronism as required in paragraph (b) of this section; or

(2) Operate under the control of a transmitter transfer control in accordance with paragraph (c) of this section.

(b) All transmitter handles and pointers must operate in synchronism. Where the transmitters are mechanically interlocked to effect synchronous operation, the requirements of § 113.35-13 must be met.

(c) Except for a transmitter in an unattended navigating bridge on a double-ended vessel, each transmitter must operate under the control of a transmitter transfer control so that movement of any one transmitter handle automatically connects that transmitter electrically to the engineroom indicator and simultaneously disconnects electrically all other transmitters. The reply pointers of all transmitters must operate in synchronism at all times.

(d) On a double-ended vessel that has two navigating bridges, a manually operated transfer switch which will disconnect the system in the unattended navigating bridge must be provided.

[CGD 74-125A, 47 FR 15272, Apr. 8, 1982. Redesignated and amended by CGD 94-108, 61 FR 28290, June 4, 1996]

§ 113.35-9 Mechanical engine order telegraph systems.

(a) Each mechanical engine order telegraph system must consist of transmitters and indicators mechanically connected to each other, as by means of chains and wires.

(b) Each transmitter and each indicator must have an audible signal device to indicate, in the case of an indicator, the receipt of an order, and in the case of a transmitter, the acknowledgment of an order. The audible signal device must not be dependent upon any source of power for operation other than that

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of the movement of the transmitter or indicator handle.

[CGD 74-125A, 47 FR 15272, Apr. 8, 1982, as amended by CGD 94-108, 61 FR 28290, June 4, 1996]

§ 113.35-13 Mechanical engine order telegraph systems; operation.

If more than one transmitter operates a common indicator in the engineroom, all the transmitters must be mechanically interlocked and operate in synchronism. A failure of the transmission wire or chain at any transmitter must not interrupt or disable any other transmitter.

§ 113.35-15 Mechanical engine order telegraph systems; application.

If a mechanical engine order telegraph system is installed on any vessel to provide the communication required by this subpart, the length of cables or other mechanical limitations must not prevent the efficient operation of the system.

§ 113.35-17 Vessels with navigating bridge control.

Each vessel with navigating bridge throttle control must have a positive mechanical stop on each telegraph transmitter that prevents movement to the "Navigating Bridge Control" position without positive action by the operator.

[CGD 74-125A, 47 FR 15272, Apr. 8, 1982, as amended by CGD 94-108, 61 FR 28290, June 4, 1996]

Subpart 113.37—Shaft Speed and Thrust Indicators

§ 113.37-1 Applicability.

This subpart applies to all self-propelled vessels.

§ 113.37-5 General requirements.

(a) A vessel equipped with fixed pitch propellers must have on the navigating bridge and at the engineroom control station a propeller speed and direction indicator for each shaft.

(b) A vessel equipped with controllable pitch propellers must have on the navigating bridge and at the engineroom control station a propeller

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speed and pitch position indicator for each shaft.

[CGD 74-125A, 47 FR 15272, Apr. 8, 1982, as amended by CGD 94-108, 61 FR 28290, June 4, 1996]

§ 113.37-10 Detailed requirements.

(a) Each indicator must be independent of the propulsion control system. A failure of the propulsion control system must not affect the operation of the indicators.

(b) Each electric component or its enclosure must meet NEMA 250 Type 4 or 4X or IEC IP 56 requirements.

[CGD 74-125A, 47 FR 15272, Apr. 8, 1982, as amended by CGD 94-108, 61 FR 28290, June 4, 1996]

Subpart 113.40—Rudder Angle Indicator Systems

§ 113.40-1 Applicability.

This subpart applies to self-propelled vessels.

§ 113.40-5 General requirements.

The position of the rudder, if power-operated, must be shown at the principal steering station. If there is non-follow-up steering control at the alternative steering station, there must be a separate rudder angle indicator system for that station that is electrically independent from each other rudder angle indicator system.

§ 113.40-10 Detailed requirements.

(a) Each rudder angle indicator system must have a transmitter at the rudder head that is actuated by movement of the rudder with the angular movements of the rudder transmitted to a remote indicator or indicators. This system must be independent of all other systems and not receive power or signal from the steering gear control, autopilot, or dynamic positioning systems. However, the indicator may be physically located on a control console, such as an integrated bridge system, if it is readily visible by the helmsman at the steering stand.